

Allen Anderson, Head Coach & CEO

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Ms. Beth O'Donnell, Executive Director Post Office Box 615 211 Sower Boulevard

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Ms. O'Donnell:

March 30, 2005

RE: Case No. 2005-00090 Response

Frankfort, Kentucky 40602-0615

South Kentucky RECC respectfully submits the data requests of Appendix B in Case No. 2005-00090. An original and ten copies are enclosed.

If we can be of further assistance, please contact us.

Sincerely,

SOUTH KENTUCKY RECC

Allen Anderson

Chief Executive Officer

AA:cw

Enclosures (11)

k: Case No. 2005-00090 Response:aa

1. Provide a summary description of your utility's resource planning process. This should include a discussion of generation, transmission, demand-side, and distribution resource planning.

#### Designated Respondent: Steve Conover, Engineering Team Leader

South Kentucky Rural Electric Cooperative (SKRECC) distribution resource planning process begins with a comprehensive Power Requirement Study (PRS) performed every two years. This study is a joint effort between SKRECC and our power supplier, East Kentucky Power Cooperative (EKPC). Data from several sources is compiled and entered into a complex computer model which provides projections of electrical demand and energy consumption on a system-wide basis for various classes of consumers 20 years into the future. Area-specific information, such as the addition of a large new industrial load or unusual growth patterns in certain areas is taken into account. Key personnel from both companies work together with our RUS Field Representative to ensure that both the input data and the generated results look reasonable.

The next step in this process is taking the system-wide projections to the distribution substation level. This phase is called the Individual Substation Forecast (ISF). The two companies work together to spread the projected loads across the system in order to forecast loading at each individual substation. In this phase, key personnel from SKRECC provide critical distribution-level information on impending feed changes, site-specific load data, and other factors that could have a bearing on the forecast. The finished forecast then becomes the backbone of future planning for SKRECC; however, actual load data is closely monitored and new trends or changes that could affect the reliability of the forecast are taken into account on an ongoing basis.

Substation (load center) studies are completed by SKRECC for areas where the ISF projects a future capacity problem. Key engineering and operations personnel from SKRECC complete these studies using Milsoft Engineering Analysis Software and special spreadsheets that evaluate the present-worth costs of at least three different scenarios for solving the capacity problems. In this process, associated costs and required work involved in each scenario are projected 20 years into the future and all costs are brought back to present-worth dollars. These studies are forwarded to EKPC and evaluated by their engineering staff. When the two companies discuss the studies and agree upon what would be the best solution, the project is sent to EKPC Board of Directors for approval. EKPC and SKRECC work together to ensure that the necessary work is completed in a timely manner.

To plan for distribution resources beyond the substations, SKRECC prepares both a Long Range System Study (LRSS) and a Three-year Construction Work-Plan (CWP). The LRSS is also utilized for substation studies and when analyzing other distribution projects that may be needed by SKRECC. The LRSS is a complex engineering study for the whole system that projects loads 20 years into the future and predicts upcoming distribution problems. The study also proposes solutions and shows how the system

could develop over the 20 year period. The LRSS is not a plan that is to be strictly followed because system conditions and projections can change rapidly. The primary purpose of the LRSS is to keep engineers from being "shortsighted" as they propose solutions to more imminent problems on a day-to-day basis and creating the CWP. The LRSS accomplishes this by helping to define how the system could look at given points of time in the future and helping engineers to see how solutions to future problems could have an impact upon the ones they are currently working on.

The CWP defines the work and funding needed to serve the projected electrical growth on the system over the upcoming three-year period. SKRECC is currently in the second year of its CWP dated 2004-2006. The LRSS, ISF, and the PRS are all used to prepare the CWP. The cooperative also reviews outage reports and SCADA records, and involves field personnel in identifying areas that need attention on the system.

Some of the most important items included in the CWP are: (1) facilities for the addition of new members, (2) upgrading of distribution facilities through methods such as multiphasing and voltage conversions, (3) the systematic replacement of aged conductor and other facilities, (4) projects that target specific problems, and (5) new facilities needed. SKRECC works closely with the RUS Field Representative in preparing the CWP and RUS gives final approval before loan funds are allocated. The cooperative generally follows RUS guidelines when making decisions relative to its planning and also utilizes other applicable standards such as ANSI and IEEE publications.

SKRECC makes adjustments and changes to its plans on an ongoing basis as it becomes necessary. Within a 3-year CWP period, there will be new factors that emerge that could have an impact on previous decisions. The engineering department monitors these changes and uses the best information available to react in a way that is consistent with good engineering practices while at the same time keeping the best interest of the cooperative's members as a primary concern.

- 2. Are new technologies for improving reliability, efficiency and safety investigated and considered for implementation in your power generation, transmission and distribution system?
  - a. If yes, discuss the new technologies that were considered in the last 5 years and indicate which, if any, were implemented.

Designated Respondent: Dallas Hopkins, Dispatch & Technical Services Team Leader

SKRECC implemented a Geographic Information System (GIS) in 2001. The GIS included physically obtaining GPS points for all meters, poles and road center lines in the field. This system produced a detailed and accurate map of SKRECC distribution infrastructure. The GIS provides tools to support the Milsoft Engineering Analysis Software for planning of future distribution facilities and the cost of distribution lines for the CWP.

In 2003, SKRECC purchased Outage Management Software (OMS) from Utility Automation Integrators (UAI). The OMS now organizes the outages from information by telephone obtained by in-house employees or our contract call center. The OMS predicts possible devices, such as reclosers or substation breakers, on the distribution system that may have tripped out. The outage calls are entered directly into the OMS system thru a web-browser. SKRECC contracted with Call Research Center (CRC) to handle outage calls during peak times to enable us to answer more outage calls and get the information into the OMS quicker.

Shortly after implementing the OMS, SKRECC purchased automatic vehicle locator (AVL) tracking devices for the majority of our service trucks. This allows the dispatcher to view the locations of all the service trucks and route the closest truck to the outage.

To support these new technologies, SKRECC has upgraded the dispatch center. A large projection screen was installed to show our entire system with the current outages. SKRECC added dual monitor workstations for each dispatcher station. In addition, the dispatchers have a satellite weather monitoring system to keep them up to date on the current weather conditions.

Recently, a new Motorola wide-area networked, trunked radio system was purchased and is being installed at SKRECC. This 450 MHz system links multiple trunked radio sites together allowing users to roam between sites and enjoy a wider coverage area. This will improve our communication to employees for day to day work and outages.

- 3. Not Applicable
- 4. Not Applicable

5. Provide actual and weather-normalized annual coincident peak demands for calendar years 2000 through 2004 disaggregated into (a) native load demand, firm and non-firm; and (b) off-system demand, firm and non-firm.

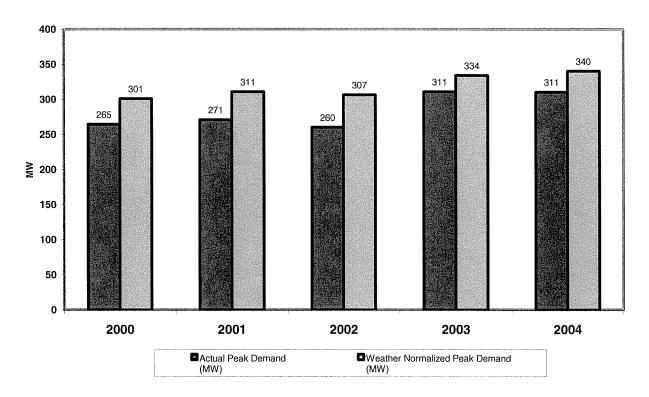
Designated Respondent: Jim Lamb, EKPC

# South Kentucky RECC Actual and Weather-Normalized Annual Coincident Peak Demands

| Annual Peak | Actual<br>Peak<br>Demand<br>(MW) | Weather<br>Response<br>Function<br>(MW /<br>Degree) | Actual Peak<br>Day<br>Temperature<br>(Degrees F) | Normal<br>Peak Day<br>Temperature<br>(Degrees F) | Weather<br>Normalized Peak<br>Demand<br>(MW) |
|-------------|----------------------------------|---|--|--|--|
| December-00 | 264.5                            | -3.32   | 9  | -2   | 301.0  |
| January-01  | 271.1                            | -3.32   | 10   | -2   | 310.9  |
| March-02    | 260.2                            | -3.32   | 12   | -2   | 306.6  |
| January-03  | 311.0                            | -3.32   | 5  | -2   | 334.2  |
| January-04  | 310.5                            | -3.32   | 7  | -2   | 340.4  |

Based on Somerset KY Weather Station Data and South Kentucky RECC Hourly Load Data

## South Kentucky RECC Annual Peak Demand Actual and Weather Normalized



#### 6 – 16. Not Applicable

- 17. Provide a summary description of your utility's existing demand-side management ("DSM") programs, which includes:
  - a. Annual DSM budget
  - b. Demand and energy impacts
  - c. The currently scheduled termination dates for the programs

#### Designated Respondent: Ruby Patterson, Marketing and Member Services Team Leader

SKRECC currently has the following programs that we consider to fit into this category. The summary of each program and the impact on our demand requirements are listed below:

Electric Thermal Storage (ETS) - Electric heaters that use ceramic brick as a storage medium are offered to the members as a supplement to, or replacement, of their existing electric heat. Members also choose to replace fossil-fuel heating systems with ETS for economic reasons, as well as health and safety concerns. Members are given a 40 percent discounted rate on the energy consumed by the ETS unit due to the energy being used during our off peak hours. At the end of 2004, we had 2,940 ETS units installed in 1766 homes. This represents 20.9 megawatts of installed off peak capacity. The average impact per residence is a reduction in winter peak demand of 3.5 kW and an increase of 9,300 kWh (off peak) per year.

Button-Up – This weatherization program promotes the Department of Energy's recommended levels of insulation and air infiltration sealing. A SKRECC Energy Advisor will evaluate the present efficiency of the member's home and make recommendations on the most effective way to lower the heat loss of the home. The member is eligible for an incentive of \$20 per 1000 BTU's of heat load reductions, up to a maximum of \$400 (which is cost shared with East Kentucky Power). At the end of 2004, we had Buttoned-Up 1,624 homes. The average energy reduction per residence is 2,730 kWh and a winter peak demand reduction of 2.7 kW.

Tune Up – This program targets member's homes that have electric central forced air systems that is in need of repair or tuning up. The program consists of air-infiltration testing, sealing ductwork, cleaning indoor and outdoor coils, changing filters, checking the accuracy of the thermostat and the operation of the compressor. SKRECC pays the contractor \$300-350 on behalf of the member and the member pays \$35-\$100 based on the structure of the home. East Kentucky Power cost shares this program as well. Year-end 2004, we had Tuned-Up 1,359 homes. The average energy reduction per residence is 2,210 kWh and a winter peak demand reduction of 2.1 kW.

Touchstone Energy Home – We also work with our local builders on building homes to the Touchstone Energy/Energy Star Home standards. The termination date for the Touchstone Energy Manufactured Home is scheduled for the end of 2007. The termination date for the Touchstone Energy Home is scheduled for the end of 2009.

The Member Services and Marketing budget encompasses these DSM programs. The 2005 budget is approximately \$446,000. Approximately 30 percent of this budget is spent on the above mentioned DSM programs. The remainder covers the cost related to the energy audits, high bill audits, school safety, environmental, and energy efficiency classes. We participate in fairs, parades, and festivals to assist in our efforts to educate our members in energy conservation as well as fulfill our mission of improving the quality of life for those we serve.

18. Provide your utility's definition of "transmission" and "distribution".

Designated Respondent: Carol Wright, COO

SKRECC distribution facilities begin at the low voltage side of EKPC's substation. The distribution feeder coming out of the substation begins the distribution facilities. All poles, wires, and services beyond this point are owned, operated, and maintained by SKRECC.

19. Identify all utilities with which your utility is interconnected and the transmission capacity at all points of interconnection.

Designated Respondent: Carol Wright, COO

SKRECC does not have any interconnections with any other utility other than EKPC, our wholesale power supplier.

20 - 25. Not Applicable

26. Provide the yearly System Average Interruption Duration Index ("SAIDI") and the System Average Interruption Frequency Index ("SAIFI"), excluding major outages, by feeder for each distribution substation on your system for the last 5 years.

#### Designated Respondent: Steve Conover, Engineering Team Leader

SKRECC calculates SAIDI and SAIFI, <u>excluding major storms</u>, on a system-wide basis. The data has not existed in the past to calculate these on a per circuit basis. Fortunately, SKRECC has implemented an Outage Management System that will allow us to calculate the indices per circuit in the future.

| Year | SAIDI (in minutes) | SAIFI      |
|------|--------------------|------------|
| 2004 | 181.2              | 1.6047     |
| 2003 | 109.4              | 1.3737     |
| 2002 | 134.0              | 1.8511     |
| 2001 | 138.2              | not avail. |
| 2000 | 137.6              | not avail. |

27. Provide the yearly SAIDI and SAIFI, including major outages, by feeder for each distribution substation on your system for the last 5 years. Explain how you define major outages.

#### Designated Respondent: Steve Conover, Engineering Team Leader

The SAIDI and SAIFI, <u>including major storms</u>, system-wide are shown below. A major storm is any event resulting in more than 30 separate outages on SKRECC's system.

| Year | SAIDI (in minutes) | SAIFI      |
|------|--------------------|------------|
| 2004 | 250.2              | 1.8547     |
| 2003 | 109.4              | 1.3737     |
| 2002 | 134.0              | 1.8511     |
| 2001 | 170.3              | 2.3900     |
| 2000 | 169.2              | not avail. |

#### 28. What is an acceptable value for SAIDI and SAIFI? Explain how it was derived.

#### Designated Respondent: Steve Conover, Engineering Team Leader

SKRECC has desired to develop benchmarks for these indices for several years, but there is little data available. RUS flags any SAIDI (5 year average) over 300 minutes as a possible problem, but we strive to achieve SAIDI equal or less than 120 minutes per year. Again, little data has been available for use to set benchmarks for SAIFI, but SKRECC has continually tried to keep the frequency and duration of outages to a minimum and maintain a downward trend in these indices. We would welcome any data that might be used to develop benchmarks for SAIFI and SAIDI.

29. Provide the yearly Customer Average Interruption Duration Index ("CAIDI") and the Customer Average Interruption Frequency Index ("CAIFI"), including and excluding major outages, on your system for the last five years. What is an acceptable value for CAIDI and CAIFI? Explain how it was derived.

#### Designated Respondent: Steve Conover, Engineering Team Leader

SKRECC calculates CAIDI on a system-wide basis. CAIFI has not been calculated in the past, but it can be calculated in the future with the Outage Management System. We do not have any benchmarks to evaluate acceptable levels for these indices. The chart below shows the CAIDI values for the last 5 years excluding and including major storms.

| Year | CAIDI (excluding major storms) | CAIDI (including major storms) |
|------|--------------------------------|--------------------------------|
| 2004 | 112.6                          | 137.3                          |
| 2003 | 79.6                           | 79.6                           |
| 2002 | 72.4                           | 72.4                           |
| 2001 | not avail.                     | 71.2                           |
| 2000 | not avail.                     | not avail.                     |

30. Identify and describe all reportable distribution outages from January 1, 2003 until the present date. Categorize the causes and provide the frequency of occurrence for each cause category.

Designated Respondent: Carol Wright, COO

SKRECC did not have any PSC reportable outages in 2003.

In 2004, SKRECC had 5 major storms that were reportable per PSC guidelines. These storms were the only reportable outages in 2004. They resulted in 33.5% of our total outages for 2004. They are listed below by date:

- 1) May 26-28<sup>th</sup>: High winds on the 26<sup>th</sup> combined with a tornado on the 27<sup>th</sup> caused outages that peaked at 3,000 members. Restoration was complete on the 28<sup>th</sup>.
- 2) May 31<sup>st</sup>: A severe storm with high winds caused outages that peaked at 4,000 members. Restoration was complete in the late hours on the 31<sup>st</sup>.
- 3) July 5-7<sup>th</sup>: A severe storm with high winds caused outages that peaked at 11,000 members. A restored transmission line re-energized 3 substations reducing total outages to 5,000 members. The outages were reduced to less than 300 on the 6<sup>th</sup> when another storm hit the area the evening of the 6<sup>th</sup>. Outages increased to 1,200 members and restoration was complete early am on the 7<sup>th</sup>.
- 4) July 13-15<sup>th</sup>: A severe storm with high winds caused outages that peaked at 15,000 late pm on the 13<sup>th</sup>. A transmission line had 3 substations out and outages were reduced to 5,000 upon restoration of the transmission line early am on the 14<sup>th</sup>. Another storm hit the service area and in the afternoon on the 14<sup>th</sup> and there were 3,400 members out of service. Restoration continued throughout the day and was complete the evening of the 15<sup>th</sup>.
- 5) September 17<sup>th</sup>: A severe storm with high winds caused outages that peaked at 1,500 members and were reduced to 200 when another storm hit our service area increasing the outages to 3,300. Restoration was complete in the late hours on the 17<sup>th</sup>.

### 31. Does your utility have a distribution and/or transmission reliability improvement program?

Designated Respondents: Carol Wright, COO

**Steve Conover, Engineering Team Leader** 

SKRECC has several programs that improve distribution reliability. The following list contains a summary of each:

Replacement of old primary conductor: Over \$4 million dollars has been allocated for RUS Code 300 in the current 2004-2006 CWP. More than 80% of this money goes toward the replacement of conductor and other aging facilities.

<u>Recloser Maintenance Program:</u> All single and three phase reclosers on the system are serviced on a five-year cycle.

System Inspection (Pole and hammer sounding program): SKRECC has two full-time inspectors that are responsible for inspecting and hammer sounding all poles within our service area in a 4 year time frame. In addition to identifying pole change-outs, the inspectors are equipped to repair broken pole grounds, replacing guy guards, identifying idle services for removal, open and inspect all pad-mount transformers, identifying maintenance and right-of-way items, and cutting vines on poles and guy wires. The inspectors also complete the 2 year visual inspection required by the PSC.

<u>Sectionalizing Study completed with each CWP:</u> Coordination between sectionalizing devices is considered and new devices are planned for.

<u>Lightning Arrestor Change-out program:</u> In the current CWP, SKRECC has allocated \$307,500 for the replacement of 3,750 old gap-type lightning arrestors that could cause reliability problems. This project is currently underway.

<u>Right-of-Way clearing program:</u> An expense budget is prepared for clearing, mowing, spraying, and maintenance items identified by field personnel each year. The five year average budget for these items is approximately \$1,800,000.

Addition of a computerized Outage Management System (OMS) in 2004: In 2003, SKRECC purchased Outage Management Software (OMS) from Utility Automation Integrators (UAI). The OMS now organizes the outages from information by telephone obtained by in-house employees or our contract call center. The OMS predicts possible devices, such as reclosers or substation breakers, on the distribution system that may have tripped out. The outage calls are entered directly into the OMS system thru a webbrowser. The system allows SKRECC to organize outages and respond quicker.

<u>Power Quality Team:</u> SKRECC has a two-man Power Quality team that works primarily on issues related to improving reliability and tracking down reliability problems.

#### a. How does your utility measure reliability?

Reliability is primarily measured through the numbers revealed in our outage reports. We also receive a quarterly member satisfaction survey with reliability as one of the categories for comment from our members. Our satisfaction from our membership has been very good for several years.

We also give special attention to small, individual lines and areas within the system. We consider an intermittent blinking problem to be unacceptable and we also give special attention to areas where outages are more severe than our system averages. In the future, our OMS System will provide us with more tools to effectively address these concerns.

#### b. How is the program monitored?

Outage reports are reviewed monthly by the System Planning Engineer and other key personnel within the company. Feedback from operating personnel is also utilized and meetings are called to discuss a particular situation or program. Progress on CWP programs is monitored by the Engineering Team Leader and the COO. The System Planning Engineer administers the recloser maintenance program. The Right-of-Way Team Leader and COO monitor the progress of the right-of-way program.

#### c. What are the results of the system?

We feel that our efforts in improving reliability are effective. Our member satisfaction and reliability/outage indices continue to be extremely high when benchmarked against other utilities. These are the identifying factors when determining if our reliability programs are successful.

#### d. How are proposed improvements for reliability approved and implemented?

Items included in the CWP are reviewed by the management of SKRECC and the RUS Field Representative. Ultimately, RUS approves or rejects the CWP. Day-to-day improvements are discussed among team leaders and the COO is also involved in many of these decisions. Implementation takes place when the work-orders are issued to either SKRECC's maintenance/construction personnel or our contractors.

#### 32. Provide a summary description of your utility's:

- a. Right-of-way management program. Provide the budget for the last 5 years.
- b. Vegetation management program. Provide the budget for the last 5 years.

Designated Respondent: Carol Wright, COO

Paul Merrick, Right-of-Way Team Leader

SKRECC has a total of over 6,400 miles of line in distribution facilities. There are approximately 4,800 miles of overhead primary distribution lines that are maintained by the right-of-way program. SKRECC is in the process of reducing the clearing cycle from 8 years to 6 years which requires approximately 800 miles of primary to be in each clearing cycle per year. SKRECC right-of-way program consists of the 6 year clearing cycle, system inspection service orders, CWP re-clearing, mowing, spraying, and routine maintenance service orders for the primary distribution lines. Our vegetation management program is included in our overall budget. SKRECC budgets to mow where applicable and spray the previous years clearing cycle to deter re-growth. In the years 2000-2002, a large portion of the right-of-way budget was allocated to remove dead pine trees throughout our system brought on by infestation of the Southern Pine Beetle. The clearing cycle in those years will reflect reduced mileage due to the resources being allocated to remove the dead pines trees.

The five year expense budgets are summarized below:

YEAR 2000: (Southern Pine Beetle Outbreak)

**CWP** 98.9 Miles System Inspection Orders No Data Clearing Cycle 228.37 Miles Mowed 817 Acres Sprayed 682 Acres Miles of Growth 91.23 Miles Service Orders 1650 (estimated) **ROW Budget** \$1,568,754

YEAR 2001: (Southern Pine Beetle Outbreak) CWP 116.01 Miles

System Inspection Orders 94

Clearing Cycle 404.89 Miles Mowed 992.3 Acres Sprayed 669 Acres Miles of Growth 85.09 Miles

Service Orders 1937

ROW Budget \$1,710,797

YEAR 2002: (Southern Pine Beetle Outbreak)

CWP 49.6 Miles

System Inspection Orders 7

Clearing Cycle 393.76 Miles
Mowed 1012 Acres
Sprayed 683 Acres
Miles of Growth 86.13 Miles

Service Orders 1747 ROW Budget \$1,694,525

**YEAR 2003** 

CWP 41.8 Miles

System Inspection Orders 34

Clearing Cycle 456.03 Miles Mowed 583 Acres Sprayed 1105 Acres Miles of Growth 86.01 Miles

Service Orders 1653

ROW Budget \$2,408,232

**YEAR 2004** 

CWP 26.1 Miles

System Inspection Orders 56

Clearing Cycle 842.03 Miles Mowed 583 Acres Sprayed 967 Acres Miles of Growth 86.81 Miles

Service Orders 1619

ROW Budget \$1,660,023

## c. Transmission and distribution inspection program. Provide the budget for the last 5 years.

SKRECC has two full-time inspectors that are responsible for inspecting and hammer sounding all poles within our service area in a 4 year time frame. In addition to identifying pole change-outs, the inspectors are equipped to repair broken pole grounds, replacing guy guards, identifying idle services for removal, open and inspect all padmount transformers, identifying maintenance and right-of-way items, and cutting vines on poles and guy wires. The inspectors also complete the 2 year visual inspection required by the PSC. The five year expense budget follows:

2000: \$141,941

2001: \$38,500 (Only 1 full-time employee)

2002: \$102,626 2003: \$99,188 2004: \$117,012

33. Explain the criteria your utility uses to determine if pole or conductor replacement is necessary. Provide costs/budgets for transmission and distribution facilities replacement for the years 2000 through 2025.

#### Designated Respondent: Steve Conover, Engineering Team Leader

SKRECC utilizes the ANSI/IEEE 738-91 method of calculating operating temperature of conductors. This information is used to ensure that conductor sags and operating characteristics meet the requirement of the National Electric Safety Code (NESC) and the standards of RUS and/or other applicable requirements.

SKRECC's RUS approved design-criteria calls for primary conductors to be replaced after reaching 75% of their thermal loading. This guideline is generally adhered to but the cooperative may chose to make an exception, such as when a new substation is scheduled within the next year that will significantly relieve the loading on the existing conductors. If the conductor is otherwise sound and adequate, the conductor might be left in operation until the substation is constructed.

Old conductors such as 4 ACSR, 6 solid copper and 6/8 CWC are replaced on a systematic basis. However, the cooperative does attempt to give priority to the old conductors that are in the worst condition and/or currently causing problems. When the CWP is compiled, the Engineering Team considers outage report information and meets with field personnel who do maintenance on overhead and underground lines. All of the information gathered from these sources is used to set priorities for the replacement of old conductors. Finally, SKRECC includes a significant amount of funding in the CWP for "unspecified" conductor replacement projects. As we become aware of new priorities during a CWP period, this funding is used to target these jobs. Any funding left over is applied to the systematic change-out of any old conductors.

As previously mentioned, poles are inspected by a two-man team on a systematic basis. A visual inspection of the entire pole plant is completed every two years, and poles are "hammer-sounded" on a four year cycle. When the inspector strikes a pole with a hammer, the resulting sound will reveal if the pole has internal decay. If the inspector determines that the pole has internal decay and/or if there is visible damage on the outside of the pole (such as woodpecker holes or significant splitting), the pole is targeted for replacement.

The tables below show our actual expenditures on RUS code 606 (pole replacements) and RUS code 300 (line changes and conversions) for the historical years of 2000 through 2004. The numbers shown for the years of 2005 through 2006 are the budgeted numbers in our current CWP.

#### Pole Replacement (RUS Code 606)

|               | Number of  |
|---------------|--|
| Dollars Spent | Poles Changed  |
| \$299,992     | 242  |
| \$579,588     | 361  |
| \$663,527     | 480  |
| \$763,525     | 522  |
| \$916,213     | 670  |
| \$840,000     | 600  |
| \$840,000     | 600  |
|               | \$299,992<br>\$579,588<br>\$663,527<br>\$763,525<br>\$916,213<br>\$840,000 |

2007 through 2025 – We plan to continue our rigorous pole inspection program, but we expect the number of poles needing to be changed to level off by 2007. We expect to change about 400 poles per year during this time period, but we will budget adequate resources necessary to keep our pole plant in good condition.

#### System Improvements (RUS Code 300)

RUS Code 300 includes a small percentage of work that is the addition of new conductor without any replacement of old conductor. We do not currently have a way of easily separating those costs. Also, a significant amount of old conductor is replaced as we complete other work that is not a part of Code 300 items.

|      | Dollars Spent | Miles of Line |
|------|---------------|---------------|
| 2000 | \$1,673,082   | 98.9          |
| 2001 | \$2,054,986   | 116.1         |
| 2002 | \$785,492     | 49.6          |
| 2003 | \$883,425     | 41.8          |
| 2004 | \$605,423     | 26.1          |
| 2005 | \$1,400,000   | 65.0          |
| 2006 | \$1,400,000   | 65.0          |
|      |               |               |

2007 through 2025 – Due to our continuing growth, we estimate our current level of construction will remain constant during this period. We estimate about 65 miles of line per year of Code 300 items to construct. This translates to \$1.4 million at current prices.